Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (original)   A method of controlling charging of a power source of a hybrid vehicle, the hybrid vehicle comprising a set of power sources including a primary power source and at least one secondary power source, and an electrical machine adapted to be driven by at least one member of the set of power sources, the method comprising:

determining a maximum output torque level of the primary power source;

determining a state of charge of the secondary power source;

determining a charge torque modifier value based on the maximum output torque level and the state of charge;

determining a target torque level for the electrical machine based on the charge torque modifier value; and

driving the electrical machine at the target torque level with the primary power source to charge the secondary power source.

2.   (original)   The method of claim 1 wherein the step of determining the maximum output torque level further includes determining whether the primary power source is providing output torque.

3.   (original)   The method of claim 1 wherein the step of determining the charge torque modifier value further comprises comparing a state of charge of the secondary power source to a threshold value and selecting a first adjustment value if the state of charge is less than the threshold value and selecting a second adjustment value if the state of charge is not less than the threshold value.

4.   (original)   The method of claim 3 wherein the first adjustment value is greater than the second adjustment value.

5.   (original)   The method of claim 3 wherein the first adjustment value is a constant based on the maximum output torque level.

6.   (original)   The method of claim 3 wherein the second adjustment value is based on the maximum output torque level and the state of charge.

7.   (original)   The method of claim 3 wherein the second adjustment value decreases linearly as the state of charge increases.

8.   (original)   The method of claim 3 wherein the step of determining a charge torque modifier value is based on the state of charge and an actual output torque of the primary power source expressed as a percentage of the maximum output torque level.

9.   (original)   The method of claim 1 wherein the primary power source is an internal combustion engine.

10.   (original)   The method of claim 1 wherein the at least one secondary power source is a battery.

11.   (original)   The method of claim 1 wherein the electrical machine is a starter-alternator.

12.   (original)   The method of claim 1 wherein the electrical machine is a motor-generator.

13.   (original)   A method for controlling charging of a power source of a hybrid electric vehicle, the hybrid electric vehicle including the power source, an engine, and an electrical machine selectively coupled to the engine and adapted to charge the power source, the method comprising:

determining whether the engine is running;

determining whether the electrical machine is being driven by the engine and is charging the power source;

determining a maximum output torque level of the engine;

comparing a state of charge of the power source to a threshold value;

selecting an adjustment value based on an amount of torque available to charge the power source;

calculating a charge torque modifier value based on the adjustment value;

determining a target torque level for the electrical machine based on the charge torque modifier value; and

driving the electrical machine at the target torque level with the engine to charge the power source;

wherein the charge torque modifier value is a constant if the state of charge is less than the threshold value and the charge torque modifier value decreases as the state of charge increases if the state of charge is greater than the threshold value.

14.   (original)   The method of claim 13 wherein the charge torque modifier decreases linearly as the state of charge increases if the state of charge is greater than the threshold value.

15.   (original)   The method of claim 13 wherein the charge torque modifier value is determined as a function of the expression:

$$Torque_{Max\%} * Adjust$$

where:

$Torque_{Max\%}$ is the maximum output torque level of the engine expressed as a percentage, and

Adjust is the adjustment value selected.

16.   (original)   The method of claim 15 wherein the maximum output torque level of the engine expressed as a percentage ($Torque_{Max\%}$) is determined as a function of the expression:

$$(\text{Torque}_{\text{Max}} - \text{Torque}_{\text{Actual}}) / \text{Torque}_{\text{Max}}$$

where:

$\text{Torque}_{\text{Max}}$ is the maximum output torque level of the engine, and

$\text{Torque}_{\text{Actual}}$ is the current output torque of the engine.

17.   (original)   A method of controlling charging of a power source of a hybrid electric vehicle, the hybrid electric vehicle comprising a primary power source, a secondary power source, an electrical machine adapted to be driven by the primary or secondary power sources, and an accelerator pedal, the method comprising:

determining a maximum output torque level of the primary power source;

determining a state of charge of the secondary power source;

comparing the state of charge to a threshold value;

selecting an adjustment value;

determining a charge torque modifier value based on the adjustment value and an actual output torque of the primary power source expressed as a percentage of the maximum output torque level;

determining a target torque level for the electrical machine based on the charge torque modifier value; and

driving the electrical machine at the target torque level with the primary power source to charge the secondary power source;

wherein when the state of charge exceeds a threshold value the target torque level decreases linearly as the output torque of the primary power source increases to provide a consistent level of vehicle acceleration as the accelerator pedal is actuated.

18.   (original)   The method of claim 17 wherein the charge torque modifier value is a constant if the state of charge is less than the threshold value.

19.   (original)   The method of claim 17 wherein the step of selecting an adjustment value further comprises selecting a first adjustment value if the state of charge is

less than the threshold value and selecting a second adjustment value if the state of charge is not less than the threshold value.

      20.   (original)   The method of claim 19 wherein the first adjustment value is greater than the second adjustment value.